

ARCHAEOLOGICAL SURVEY AT HILLENDALE MINE

Annual Report

For: EXXARO (Pty) Ltd

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INTRODUCTION

Umlando was contracted by Exxaro (Pty) Ltd to undertake monthly surveys at the Hillendale mine. The appropriate mitigation would be undertaken if required after each survey. This report is a summary of the work undertaken in 2008.

While surveys were supposed to be undertaken every month, this was not the case, as at times, the mine had not moved forward enough to warrant a survey for that month.

In general, one site was re-recorded and noted to have several “clusters” of artefacts and were appropriately subdivided.

A historical architectural survey was also undertaken for the Umhlatuze Valley Sugar farm buildings.

METHOD

The archaeological survey consists of a foot survey along the selected area. These areas are normally less than an acre in size, and have been cleared of the vegetation and some of the topsoil. The aim of these surveys is to assess the area in terms of the concentration and age of the artefacts.

All sites are grouped according to low, medium, and high significance for the purpose of this report. Sites of low significance have no diagnostic artefacts, especially pottery. Sites of medium significance have diagnostic artefacts and these are sampled. Sampling includes the collection of artefacts for future analysis. All diagnostic pottery, such as rims, lips, and decorated sherds are sampled, while bone, stone, and shell are mostly noted. Sampling usually occurs on most sites. Sites of high significance are excavated and/or extensively sampled. Those sites that are extensively sampled have high research potential, yet poor preservation of features. We attempt to recover as many artefacts from

these sites by means of systematic sampling, as opposed to sampling diagnostic artefacts only.

Defining significance

Archaeological sites vary according to significance and several different criteria relate to each type of site. However, there are several criteria that allow for a general significance rating of archaeological sites.

These criteria are:

1. State of preservation of:

- 1.1. Organic remains:
 - 1.1.1. Faunal
 - 1.1.2. Botanical
- 1.2. Rock art
- 1.3. Walling
- 1.4. Presence of a cultural deposit
- 1.5. Features:
 - 1.5.1. Ash Features
 - 1.5.2. Graves
 - 1.5.3. Middens
 - 1.5.4. Cattle byres
 - 1.5.5. Bedding and ash complexes

2. Spatial arrangements:

- 2.1. Internal housing arrangements
- 2.2. Intra-site settlement patterns
- 2.3. Inter-site settlement patterns

3. Features of the site:

3.1. Are there any unusual, unique or rare artefacts or images at the site?

3.2. Is it a type site?

3.3. Does the site have a very good example of a specific time period, feature, or artefact?

4. Research:

4.1. Providing information on current research projects

4.2. Salvaging information for potential future research projects

5. Inter- and intra-site variability

5.1. Can this particular site yield information regarding intra-site variability, i.e. spatial relationships between various features and artefacts?

5.2. Can this particular site yield information about a community's social relationships within itself, or between other communities?

6. Archaeological Experience:

6.1. The personal experience and expertise of the CRM practitioner should not be ignored. Experience can indicate sites that have potentially significant aspects, but need to be tested prior to any conclusions.

7. Educational:

7.1. Does the site have the potential to be used as an educational instrument?

7.2. Does the site have the potential to become a tourist attraction?

7.3. The educational value of a site can only be fully determined after initial test-pit excavations and/or full excavations.

The more a site can fulfill the above criteria, the more significant it becomes. Test-pit excavations are used to test the full potential of an archaeological deposit. This occurs in Phase 2. These test-pit excavations may require further excavations if the site is of significance (Phase 3). Sites may also be mapped and/or have artefacts sampled as a form of mitigation. Sampling normally occurs when the artefacts may be good examples of their type, but are not in a primary

archaeological context. Mapping records the spatial relationship between features and artefacts. A Phase 2 may also include observing construction activity at sensitive sites.

A Phase 2 may yield enough material so that further excavations are not required. However, if significant material occurs in the archaeological deposit then it is likely that a Phase 3 will be required.

RESULTS

The Hillendale mine was surveyed ten times during 2008. Of the several areas were surveyed throughout the year, only one area had a high concentration of artefacts: HIL005 (2831DD 038¹), and this was repeatedly monitored throughout the year. HIL16 (2831DD 050) was also monitored

EXX02:

EXX02 is located on a hill overlooking the Mhlatuze River. It consists of a surface scatter of Late Iron Age pottery as well as some pieces of slag.

HIL16 (2831DD 050)

Appendix A is a summary of the report of excavations at HIL16. The site currently consists of the same type of material excavated in 2002. No diagnostic sherds were observed. A few broken tuyère fragments and pieces of slag occur on the surface. As in 2002, there are no obvious furnaces present. We sampled a few pieces of slag and tuyère fragments.

HIL05 (2831DD 038):

HIL05 is located on a small hill overlooking the Mhlatuze floodplain. It was originally recorded in 1995. The site then consisted of several adiaagnostic sherds and several Middle Stone Age stone flakes. We observed similar material during the course of the year, along with some pieces of slag.

¹ This is the official National Site Number, and differs from the recorder's number

HIL05a was recorded in 2006. HIL05a and EXX02 are essentially the same site, ~100m apart. These two sites yielded Late Iron Age, or Historical Period, pottery. The site extends a further ~200m to the northwest (called HIL05b) and north (called HIL05c). HIL05b consists of thin walled pottery and small fragments of slag, while HIL05c consists of an ephemeral scatter of pottery.

The above sites occur on the same hill and the Iron Age components are probably contemporary. The occurrence of slag suggests that the Iron Age part of the site dates to the early Historical Period, or the Late Iron Age.

Umhlatuze Valley Sugar

Exxaro is preparing to mine the Umhlatuze Valley Sugar (UVS) land, especially those areas near the houses. While the houses probably post-date the 1940's, some of the original buildings date to the 1910 when the farm was established². This means that there will be middens (that is rubbish dumps) older than 60 years. The KZN Heritage Act protects these middens.

I suggest that all middens that are exposed during the demolition of the houses are left intact until I have assessed them, and ascertained their correct age. The sampling of the early middens may yield information regarding the initial occupation of this farm.

² D Whelan. 2007. Historical and Architectural Impact Assessment Report for the Umhlatuze Valley Sugar Company model village site on the Farm UVS 16362, Umhlatuze, Uthungulu District Municipality. Report for Exxaro.

CONCLUSION

The 2008 survey yielded very few new sites; rather a cluster of several sites along the main hill. The middens, or rubbish dumps, at U.V.S. must not be cleared after they have been exposed, as they need to be correctly assessed by Umlando personnel.

It is recommended that monitoring of the mining lease continues.

**APPENDIX A
2002 REPORT FOR HIL16**

INTRODUCTION

Ticor approached the ICRM to complete archaeological excavations at their Hillendale Mining Plant, in February 2002. This was the last of a series of sites regarded as having archaeological significance, and that would have been affected by mining activities (Anderson 1996). The excavations at 2831DD 50³ (previously named Hill16) were undertaken in June 2002. The archaeological excavations are now complete and only the periodical site inspections/surveys remain⁴.

2831DD 44 is located on the northern parts of the hill overlooking the Mhlatuze River (Valley) and Lake Chuba. Esikhaweni is located approximately 5km toward the southeast.

The site dates mostly to the early second millennium AD (*c* AD 900 – 1100), although some artefacts pre-date and post-date this main period of occupation.

METHOD

We resurveyed the site locating areas of artefact concentrations, once the land had been cleared of sugar cane. These areas were demarcated as areas for potential excavations.

A total of 12 squares were excavated to an average depth of 50 cm below the surface. Each square was excavated in 10 cm spits where there was no visible stratigraphy. Alternatively, different lenses were removed as a whole where stratigraphy was visible. The basal sand tended to be a dark reddish-brown clay-like soil suggesting the beginning of the Berea Reds. Above this layer is a brown-red layer varying between 30 cm and 70 cm in depth. This is the archaeological deposit and occurs just below the topsoil that varies between 10 cm – 20 cm in depth.

³ This is the sites official National Site Number

⁴ These occur once every 4 – 6 months when the vegetation has been removed for the next area mining.

Excavated squares were also placed over the site to locate some form of spatial patterning of the site. However, parts of the site have been previously damaged by housing developments to the east of the site.

ARTEFACTS AND FEATURES

Various artefacts were recovered suggesting that the site is a metal working area rather than a domestic area.

Pottery

The pottery from the site can be placed into three Phases of the Iron Age: two from the Early Iron Age (Ndongondwane and Ntshekane), and one from the Late Iron Age.

The Late Iron Age pottery is characterised by thin-walled sherds of which some have a “wart”, and/or a reddish-brown burnish.

Most of the Early Iron Age pottery was located near upper excavated squares, and two sherds are in direct association with the furnace. The Ntshekane sherds are the most frequently occurring sherds on the site. This suggests that the majority of the occupation belong to the Ntshekane Phase. The Ndongondwane sherds tend to occur on the upper slopes of the site (the southern end). Alternatively, the site is at the interface between the Ndongondwane and Ntshekane Periods.

Stone

The main types of stone recorded at the site are upper grinding stones and hammer stones. These artefacts are consistent with iron smelting sites.

Bone

Very few faunal remains were recovered. Those that were observed came from the upper horizons and are probably more recent in age.

Marine Shell

Some marine shell was recovered along the northeastern parts of the site. These were initially only observed on the surface, and the areas were excavated to expose shell middens. However, I did not observe any shell middens below the surface.

Metallurgy

The main type of metal working activity on this site was for iron production. There are several concentrations of slag on the slope of the hill, and the main excavations were located in these areas.

The metallurgical-related artefacts included slag, iron, and furnace fragments. No iron artefacts were recovered, however this is to be expected as the soil is too acidic to preserve iron artefacts.

Special Finds

Few special finds were recovered.

These include:

- A ceramic pipe
- A possible figurine fragment

Furnaces

Only one furnace area was recorded with two possible furnaces, in the Square 1A – C area. The area appeared approximately 25 cm below the surface in a noticeable ashy-grey soil (named SPGS) and a Brown Sand in a Slag Pit (SPBS). This ashy-grey soil varied between 5 cm and 20 cm in depth, and is above the red clay-like soil. The furnace itself is very fragmented due to sugarcane farming and the acidity of the soil. The furnace is “visible”, however, through a large pit in an oval shape. The pit is ±45 cm deep, and was excavated into the red clay-like sand.

This pit is filled with SPGS, and a large quantity of pottery, fire-cracked rocks, furnace fragments, slag and iron ore are situated beneath it. Parts of the furnace wall are visible in the south section. These fragments indicate that the profile of the furnace was in an oval shape.

Approximately 50 cm to the east of this furnace is another small slag feature named SPBS. This feature consists of slag, tuyéres, some iron ore, hammer stone fragments, and pottery in an ashy-brown soil.

DISCUSSION

The site was excavated due to its potential for iron smelting features. The original report indicated that the site would date to the Late Iron Age. The site was considered significant as few late Iron Age furnaces have been excavated in this region.

The excavations revealed that at least two occupations occur at the site. The upper occupation dates to the Late Iron Age, and it is consistently in the upper 20 cm of the deposit throughout the site. The second (and older) occupation mostly dates to the Ntshekane Phase of the Early Iron Age (c. AD 850 – AD 1100). The latter occupation is directly associated with the furnaces. No in tact features were

recorded due to the poor preservation of the furnaces. However, the furnace area appears to conform to the standard practice of two furnaces besides each other.

The excavation was stopped as it was unlikely to have yielded further information, or in tact features, regarding iron smelting for this period.

The archaeological excavations for the Ticor Mining at Hillendale is now complete and little further mitigation is required. The only mitigation still required is that of a regular monitoring program as the mining process continuous. This should occur approximately once every 4 – 5 months.

APPENDIX B
SITE RECORD FORMS

ARCHAEOLOGICAL SITE RECORD FORM

SITE CATEGORY: (X where applicable)

Stone Age

Early Iron Age:

Late Iron Age: **x**

Historical Period:

Recorder's Site No.: **EXX02**

Official Name:

Local Name:

Map Sheet: **2931DD Felixton**

Map Reference: **S: 28 49' 20.2" E: 31 56' 11.4" Alt: 61m**

GPS reading? **yes**

DIRECTIONS TO SITE: SKETCH OR DESCRIPTION.

The site is located at the top of a hill overlooking the Mhlatuze River.

SITE DESCRIPTION:

Type of Site: **Open/surface**

Merits conservation: **Yes. Monitoring**

Threats: **Yes**

What threats: **Exxaro Mining**

RECORDING:

Details of graphic record: **None**

Recorder/Informant: Name: Umlando, Gavin and Louise Anderson

Address: PO Box 102532, Meerensee, 3901

Owner:

References:

Date: **11-Apr-08**

DESCRIPTION OF SITE AND ARTEFACTUAL CONTENT.

The site consists of a scatter of LIA pottery and some slag.